

REMARKS

After entry of this amendment, claims 1-45 are pending. Claim 4 has been amended to correct the antecedent basis in complying with U.S. practice. No new matter has been added.

In response to the restriction requirement set forth in the Office Action mailed May 23, 2006, Applicants provisionally elect Group II, claims 4-14, 18, 19, 23, 24, and 45, and the pair of SEQ ID numbers SEQ ID NO: 5 or sequence encoding SEQ ID NO: 6, with traverse. Applicants respectfully traverse and strongly urge reconsideration and withdrawal of the restriction requirement for the following reasons.

The Claimed Inventions Share a Special Technical Feature

Because this application is a national stage filing pursuant to 35 U.S.C. § 371, unity of invention under PCT Rule 13.1 and 13.2 is the applicable standard. Unity of invention is fulfilled “when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical feature. The expression ‘special technical feature’ shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.” (PCT Rule 13.2).

The Examiner argues that the inventions of Group I-VII do not relate to a “special technical feature” which defines a contribution over the prior art, citing U.S. Patent No. 6,232,526 to McElroy and U.S. Patent No. 6,174,724 to Rogers. Applicants respectfully disagree that the inventions of the present application do not make a contribution over the references cited by the Examiner.

As stated in the specification, the general inventive concept of the present application relates to using hemoglobin- and/or leghemoglobin-expressing transgenic plants whose storage reserve content is modified over that of the wild type, and to the transgenic plants themselves. Preferably, the storage reserve content of the plants is modified by modulating the expression of hemoglobin and/or leghemoglobin in plants. Furthermore, as also stated in the specification at page 4, line 22, leghemoglobin belongs to the family of the hemoglobin proteins. Thus, the

general inventive concept of the present application can be briefly summarized as relating to modulation of the storage reserve content of a plant by manipulating the expression of a nucleic acid encoding hemoglobin.

Both references cited by the Examiner, U.S. Patent No. 6,232,526 to McElroy and U.S. Patent No. 6,174,724 to Rogers, teach genetically engineered plants and mention hemoglobin. However, neither reference suggests increasing storage reserves.

Accordingly, the inventive concept of modifying the storage reserve content by increasing the expression of a nucleic acid that encodes for a hemoglobin (“special technical feature”) is shared by all of the claims of Groups I to VII. For instance, over-expression of a nucleic acid construct comprising a nucleic acid that encodes for a hemoglobin, including leghemoglobin, as stated in claims of Restriction Groups III, IV and V leads to the production of the transformed plants as defined in claims of Restriction Groups I and II. Ultimately, the over-expression of such a nucleic acid leads to an increased storage reserve content in plants according to the invention as disclosed in claims of Restriction Group VI and VII. According to Section 131(ii) of the WIPO Applicants Guide, a process and an apparatus specifically designed for use in that process are considered as having unity of invention. A vector or gene construct as claimed in claims of Restriction Groups III, IV and V is specifically designed for generating the transformed plants as claimed in claims of Restriction Groups I and II and carrying out the methods of the present invention as claimed in claimed of Restriction Groups VI and VII. Therefore, these claims should be considered together based on unity of invention, and could be examined together with minimal burden.

The International Examiner Found Unity Of Invention Regarding

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Furthermore, unity of invention was found during the International stage. As shown in the International Preliminary Examination Report and International Search Report, all claims were searched and examined together. Thus, application of PCT Rules 13.1 and 13.2 by the International Examiners suggests that unity exists. All the groups were searched and examined together by the International Search Authority and the International Examination Authority.


Applicants respectfully submit that the restriction requirement should be withdrawn even under restriction practice. As stated in § 803 of the M.P.E.P. “[i]f the search and examination of the entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.” (M.P.E.P. § 803, emphasis added). As the International stage of the prosecution showed, there would be no undue burden on the Examiner to search and examine the entire application.

Conclusion

For at least the above reasons, Applicants respectfully request that the restriction requirement be reconsidered and withdrawn.

Applicants are submitting their response herewith within the one-month response period. Applicants believe that no fee is due. However, if an additional fee is due, the Director is authorized to charge our Deposit Account No. 03-2775, under Order No. 13311-00008-US from which the undersigned is authorized to draw.

Respectfully submitted,

By 
Hui-Ju Wu

Registration No.: 57,209
CONNOLLY BOVE LODGE & HUTZ LLP
1007 North Orange Street
P.O. Box 2207
Wilmington, Delaware 19899
(302) 658-9141
(302) 658-5614 (Fax)
Agent for Applicant

#471469